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CASE
OF
ANEURISM,
PRESENTING SOME PECULIARITIES;
WITH REMARKS.

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G. B., ætat. 31, was admitted into St. George's Hospital, under the care of Sir Benjamin Brodie, in May 1839, with a pulsating tumour, of the size of a pullet's egg, in the left groin, about an inch below Poupart's ligament, and apparently connected with the common femoral artery. The tumour, which was soft and compressible, presented very evident pulsation and expansion, accompanied by a distinct whir. The patient stated that he had, for the first time, perceived the tumour about three weeks previous to his admission, when it was of the size of a small walnut, but that he could not assign its appearance to any cause. He complained of great pain down the leg, but particularly at the inner side of the knee; the pain was accompanied by a sensation of pins and needles in the limb. He was a carpenter by trade, and had been in the habit of lifting very heavy weights. His manner was irritable, owing, most probably, to his having drunk very hard, but his general health was, he stated, very good.

As a careful examination of the heart and large arteries did not point out any disease about these parts, Sir B. Brodie applied, on the 30th of the month, a ligature to the external iliac artery, some distance above the origin of the epigastric,

and all pulsation in the tumour ceased immediately. The operation was followed by peritonitis, which was treated with small blood-lettings, and calomel and opium. The inflammatory symptoms soon put on a typhoid character; the wound, which had partially healed, was opened, and a quantity of sanious putrid matter evacuated. Subsequently it was found necessary, on account of his previous habits, to give him wine, &c., and, under this treatment, he gradually rallied from this severe attack. With the exception of some slight ailments, he went on improving; the ligature came away, without any mischief, on the 25th day after it had been applied; the tumour in the groin became solid, and gradually decreased in size; the wound healed, and he was discharged from the hospital on the 14th of August, cured.

At the latter end of November, he was re-admitted into the hospital, on account of a return of slight pulsation and a whirring sound in the tumour, which had again slightly increased in size. He stated that, after leaving the hospital, he had returned to his work, and that everything had gone on well, until the beginning of this month, when the pulsation began to make its appearance. Sir B. Brodie ordered pressure to be tried: the patient was accordingly confined to his bed; some graduated compresses were applied over the tumour, the whole limb carefully bandaged, and a figure of 8 bandage was passed round the pelvis and the upper part of the thigh. This plan of treatment was pursued for two months, at the end of which time all pulsation and sound again disappeared, and the patient was shortly afterwards once more discharged from the hospital.

He was seen again in November 1841, when it was found that there was a slight recurrence of the pulsation; as the tumour had not, however, increased in size, no plan of treatment was adopted.

In January 1842, when seen again, the tumour was observed to have increased in size, but no pulsation whatsoever could be detected in it, even after a most careful examination.

From this period, the tumour gradually but steadily increased in size for the ensuing twelve months, during which time it grew to the size of the egg of an ostrich ; its surface was somewhat irregular, and softer in some parts than in others, although the tumour itself was perfectly solid. During the whole of the time neither pulsation nor sound of any kind could be detected in the tumour, although repeated and careful examinations, both manual and stethoscopic, were made by several experienced surgeons.

In January 1843, the tumour became stationary, and some time afterwards it began to diminish ; the decrease in size continued until July of the same year, when the patient died of phthisis, symptoms of which had existed for some time.

At the examination of the body, the lungs were found thickly studded with tubercles and vomicæ, in various stages of development ; the cavities of the heart were somewhat dilated, and their walls were thinner than natural, but the valvular apparatus was healthy. No morbid appearance was observed in any part of the whole course of the aorta. The viscera contained in the abdominal cavity presented nothing remarkable.

The tumour, which was situated in the left groin, was lying upon the superficial femoral artery, at about a quarter of an inch below the point where this vessel comes off from the common femoral. When separated from the neighbouring parts, it was of the size of the head of a full-grown fœtus, slightly irregular on its surface, but perfectly solid throughout. Upon being cut into, it presented the characteristic layers of coagulated blood observed in aneurisms which have been cured. These coagula, which had, for the greater part, lost their colouring-matter, were disposed in very thin layers, closely packed together, and completely filling up the aneurismal sac, which was formed by the outer coat of the vessel, and remarkably thin towards its anterior part. The portion of the superficial femoral artery, about two inches, with which this aneurism was connected, was flattened, completely ob-

literated, and identified with the tumour, below which the cavity of the artery was filled with a coagulum, about an inch in length, somewhat smaller than the vessel, and adherent to it at its upper part only; the remaining part of this vessel presented a natural appearance. The whole of the common femoral was dilated to the size of the common iliac, and irregular on its surface, the irregularity depending upon some smaller dilatations superadded to the general dilatation, which extended up to the external iliac, at the point of the giving off of the epigastric and circumflex arteries. The internal surface of this dilated vessel was covered by thin layers of coagulated fibrine, which, beginning a little below the origin of the epigastric, were continued downwards into the upper parts of the superficial and deep femoral arteries. In the superficial femoral, these coagula completely blocked up the cavity of the artery; but in the deep and in the common femoral, they merely formed a lining to these vessels, a large and distinct channel being still left for the passage of the blood. This channel was, for the greater part, perfectly smooth, and lined by a membrane, of new formation, presenting all the characters of the serous coat of the artery, for which it might easily have been mistaken. Both the membrane and the coagula were, however, with a little care, detached from the internal coat of the artery, which did not appear to be diseased. These coagula did not pass further than half an inch down the deep femoral; below this, the coats of the artery presented a perfectly healthy aspect.

The external iliac artery, from a little above the origin of the epigastric and circumflex, to within a quarter of an inch of the common iliac, was completely obliterated, and reduced to the size of a small quill; the point at which the ligature had been applied was marked by a constriction, situated about an inch above the origin of the epigastric. The various branches given off from the external iliac, and from the common and deep femoral arteries, were much larger than natural; but as I was not allowed to make a minute dissection of these vessels, I cannot enter into any detail concerning this

point of the subject. No abnormal distribution of vessels was observed either about the aneurismal sac, or in the large arteries of this region.

Remarks.

Several cases in which pulsation has re-appeared in an aneurismal tumour after the application of a ligature to the main trunk of the affected artery have already been recorded. The case just related differs, however, from most of those on record, in the long intervals which elapsed between the two periods, when the pulsation recurred; intervals during which the tumour presented all the appearances of being cured.

No abnormal distribution of the arteries having been found, the re-appearance of the pulsation is to be explained by the situation of the aneurismal tumour, which, when once the collateral branches were sufficiently dilated, became affected by the large current of blood brought into its immediate neighbourhood,—a current of blood sufficient to overcome, for a time, the efforts made by Nature to establish a cure, which she ultimately accomplished.

The great increase in size which this aneurism presented, even after all pulsation and all sound had ceased in it, is a fact worthy of the attention of all practical surgeons. By this increase in size, and the other circumstances accompanying this aneurism, several experienced surgeons were led to the supposition that the tumour was of a malignant character, and supplied with large arteries, the growth of which had been checked for a time by the obliteration of the external iliac artery. This case, which, for so long a period, was accompanied by such unusual circumstances, acquires an increased degree of interest, when it is compared with some of the cases of pulsating tumours, to which our attention has been so lately directed by Mr. Stanley, in the last volume of the Transactions of this Society.

With reference to the pathology of aneurisms, the appearances observed about the common femoral present two points

of interest. It has been stated that the coagula lining this dilated vessel were covered over by a thin, delicate membrane, presenting to the naked eye all the characters of the serous coat of an artery.

The cavity of a vessel thus dilated may be restored nearly to its natural diameter by the deposition of thin layers of coagula in the dilated portion ; the free surface of these coagula being subsequently covered by a membrane, of new formation, of a serous aspect, and perfectly adapted to the true serous coat of the artery, the disease will at first appear to consist, not in a dilatation of the vessel, but merely in a thickening of its coats with a deposition between them. Lastly, the appearances observed in this dilated vessel may also, under certain circumstances, be readily mistaken for what is termed a dissecting aneurism. If the thin layers of coagula and the false membrane should not be connected with the internal coat of the artery in the whole of their circumference, or if the coagula should be partially detached from each other, a channel will be left through which the blood may pass, and thus the most prominent appearances of a dissecting aneurism will exist ; the serous membrane, of new formation, representing the internal coat of the artery, and the coagula, its middle coat, diseased and thickened.

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